

DC/DC CONVERTER

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ABSTRACT OF THE DISCLOSURE

An auxiliary resonance type DC/DC converter which is compact, inexpensive and highly efficient is provided. In
10 a step-down type DC/DC converter 15, comprising two main switches 1 and 2 connected between input terminals 11 and 12 and a smoothing reactor L_0 connected between a junction M of the main switches 1 and 2 and an output terminal 14, an auxiliary resonance circuit 10 in which a resonance reactor L_r and an auxiliary switch 3 are connected in series is provided between the junction M and the output terminal 14 and, moreover, capacitors C_1 and C_2 for resonance are provided in parallel to the main switches 1 and 2, respectively. The auxiliary switch 3 is
15 turned on when the main switch 2 is turned off and the main switch 1 is turned on, and the electrical energy is supplied from the output terminal 14 to the resonance reactor L_r , then, the main switch 1 is turned on when a voltage V_{ds} across the main switch 1 falls to zero due to
20 the resonance of L_r and C_1 and C_2 .
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